METHODS FOR IN SITU GENERATION OF NUCLEIC ACID ARRAYS

ABSTRACT OF THE DISCLOSURE

Methods of producing nucleic acid arrays using an *in situ* nucleic acid synthesis protocol are provided, where the *in situ* nucleic acid synthesis protocol includes a plurality of cycles, each of which includes: (I) a monomer attachment step; and (II) a functional group generation step, the latter of which may include: (a) oxidation and (b) deblocking substeps, and optionally a capping substep. A feature of the subject methods is that, following deblock of the surface, the deblocking fluid is displaced or purged from the surface using a fluid of different density, e.g., an oxidization fluid or wash fluid. Also provided are the arrays produced using the subject methods, as well as methods for use of the arrays and kits that include the same.